



NEW MEXICO
Junior College

ASSESSMENT OF STUDENT LEARNING HANDBOOK

Spring 2010

To: NMJC Faculty

From: Student Learning Outcomes Assessment Committee

Re: Introduction to Assessment at NMJC

This handbook is intended to assist faculty in the assessment process at all levels. The mission of New Mexico Junior College (NMJC) is to promote “success through learning.” Assessing student learning is necessary to ensure that we fulfill the mission of NMJC. There are three (3) levels of assessment described in detail in this handbook: course, which consists of two categories, general education and other; departmental or program; and, institutional. We want to establish a culture of student learning by embedding assessment processes at all levels.

The primary responsibility of individual faculty is to perform course-level assessment. Faculty are required to assess at least two courses each semester. Assessment of general education is satisfied when faculty assess a course that is part of the general education requirements. Most often, the general education assessment will meet the requirement for course-level assessment for the semester and is not an additional requirement.

The next level is departmental or program assessment. “Departmental” refers to areas that contribute to associate of art or associate of science degrees and “program” refers to areas that award certificates with applied science degrees. This level of assessment is where individual assessment processes should be brought together with other professors to compile data and report on the department or program as a whole. Faculty cooperate with one another to establish that the department or program is accomplishing student learning in that area. The outcomes or objectives are set by the faculty in the department or program and are not necessarily the same as specific course objectives.

Finally, at the institutional level of assessment there are three learning outcomes that students graduating from NMJC should achieve: communication, critical thinking and problem solving, and self and community. These are described in detail in the institutional section of the handbook. Faculty should be prepared to assist the Student Learning Outcomes Assessment Committee (SLOAC) with this level of assessment. The committee will provide the faculty with explanation and assistance if they are called on to provide student artifacts.

Please use this handbook to help you in accomplishing your part of the overall goal of building a culture of student learning across NMJC to ensure we are meeting our mission and serving our students.

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SECTION 1
INTRODUCTION TO ASSESSMENT

New Mexico Junior College: Mission and Vision

Mission Statement

New Mexico Junior College, as a comprehensive community college, promotes success through learning.

Vision Statement

New Mexico Junior College's mission will be achieved by building a culture that values and promotes excellence, effectiveness, responsiveness, access, and community involvement.

Statement on Assessment

Although many definitions exist for outcomes assessment, the Student Learning Outcomes Assessment Committee (SLOAC) has agreed on the following statement on assessment at NMJC:

The assessment process begins by establishing expected learning outcomes. These outcomes lead to defining criteria that appraise student knowledge, skills, and attitudes. Appraisal results enhance student learning by providing faculty with information useful for improving pedagogies, curricula, and/or assessment strategies.

Definition of Assessment

Assessment of student learning can be defined as *the systematic collection of information about student learning, using the time, knowledge, expertise, and resources available, in order to inform decisions about how to improve learning*. Assessment is a kind of “action research,” intended not so much to generate broad theories as to inform local action (p.2) Through assessment we gain a better understanding not only of what works, but also of why it worked and how it can be repeated. The desired end of assessment should be action – action that sustains what is working or improves what is not (Walvoord, 2004).

Rationale for Assessment at New Mexico Junior College Student Learning and Effective Teaching

The Higher Learning Commission (HLC) expressed the following expectations for assessment:

- Development of student learning outcomes at both the course and program level;
- An institutional-level assessment plan that includes learning goals for all program areas, a realistic timeline, a data collection process, actual interpretation of data, and evidence of data-driven decisions that result in improvement of student learning;
- A true function “to close the loop,” and;
- Development of an action plan by the faculty based on assessment and expected outcomes to make changes for the next semester, year, and beyond.

Walvoord's Three Steps of Assessment

1. Articulate your goals for student learning (“When they complete [this course; this program], students will be able to ...”).
2. Gather evidence about how well students are meeting the goals. *Direct* measures evaluate student work (i.e., exams, papers, projects, computer programs). *Indirect* measures include asking students how well they thought they learned. Evidence includes qualitative as well as quantitative information.
3. Use the information for improvement of student learning (Walvoord, 2004).

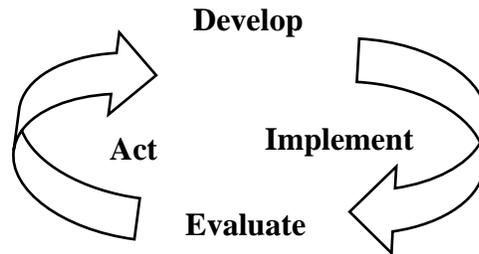
Reference

Walvoord, B.E. (2004). *Assessment clear and simple: A practical guide for institutions, departments, and general education*. San Francisco: Jossey-Bass.

SECTION 2
COURSE ASSESSMENT

Overview of Course-Level Assessment

Assessment is not a task that gets completed. It is a constant process. Based on the results, it can change, but it is never finished.



1. Develop the learning outcomes (goals). These correspond to objectives in the course syllabus.
2. Identify and select appropriate assessment methods.
3. Set benchmarks to assess learning outcomes.
4. Develop a plan and timeline to carry out assessment.
5. Do the assessment.
6. Evaluate the results.
7. Based on the results determine and implement an action plan.
8. Document and communicate findings with appropriate individuals.
9. Next term assess success of action plan.

Process for Course-Level Assessment

1. **Select two (or more) courses to assess per term.** The minimum is two courses. Instructors should also complete any course assessments needing follow-up from earlier terms, to close the loop. Instructors should assess each course they teach within a three-year period. If a course has several sections taught by different instructors, each may complete their own assessment using their own assessment method. The end of this section has the worksheet to be filled in for each course being assessed. The Office of Institutional Effectiveness (OIE) needs the assessment set up information for the courses to be assessed by Friday of the in-service week at the beginning of the term. Once the courses are selected and reported to OIE they should not be changed during the semester.

2. **Define student learning outcomes for each course to be assessed.** When providing the OIE with the set up information for courses to be assessed, the student learning outcomes must be included. Student learning outcomes for a course generally remain the same from one semester to the next, but can be edited if appropriate. Outcomes correspond to objectives listed in the course syllabus. Consider the following example:

ELEMENTARY ALGEBRA, TS113F

General Course Objective (As stated in syllabus)	Specific Course Objectives (As stated in syllabus)	STUDENT LEARNING OUTCOME (To be submitted as part of assessment plan)
Elementary Algebra is designed to provide the student with the basic algebra needed for further college-level mathematics courses	<ul style="list-style-type: none"> • Add, subtract, multiply and divide real numbers • Simplify numerical expressions using the properties of real numbers combined with the order of operations • Determine the difference between an expression and an equation 	<p>The student should be able to use the structure of algebra, properties of real numbers and the order of operations to work problems.</p> <p>(Note: The Student Learning Outcome is a condensed paraphrase of the first few specific objectives.)</p>
	<ul style="list-style-type: none"> • Solve linear equations • Solve application problems involving linear equations • Solve application problems involving ratios, proportions, and percents. 	The student should be able to solve linear equations and use the techniques to solve application problems.
	<ul style="list-style-type: none"> • Graph linear equations • Find the equations of lines given necessary details 	The student should be able to graph a linear equation and use details from a graph to write an equation.
	<ul style="list-style-type: none"> • Add, subtract, multiply and divide polynomials • Simplify algebraic expressions using the rules of exponents 	The student should be able to perform operations and simplify polynomial expressions.
	<ul style="list-style-type: none"> • Factor polynomials • Solve quadratic equations using the zero product property • Solve application problems involving quadratic equations 	The student should be able to factor, solve, and set up quadratic expressions and equations.

3. **Determine how you will assess each outcome.** Assessment methods include projects, essays, tests, presentations, research papers etc. Each outcome must have at least one assessment method. Ideally, a rubric should be created to demonstrate the desired competencies for each assessment method. Final grades for a course are NOT a measurement for assessment purposes. To continue the above example:

ELEMENTARY ALGEBRA, TS113F

STUDENT LEARNING OUTCOME	ASSESSMENT METHOD
1. The student should be able to use the structure of algebra, properties of real numbers and the order of operations to work problems.	1. Test and chapter summary (A more detailed description can be given.)
2. The student should be able to solve linear equations and use the techniques to solve application problems.	2. Test and project (A more detailed description can be given.)
3. The student should be able to graph a linear equation and use details from a graph to write an equation.	3. Test and presentation (A more detailed description can be given.)
4. The student should be able to perform operations and simplify polynomial expressions.	4. Test and chapter summary (A more detailed description can be given.)
5. The student should be able to factor, solve, and set up quadratic expressions and equations.	5. Test and project (A more detailed description can be given.)

4. **Set a benchmark for each assessment method on each outcome.** A benchmark is a standard by which something can be measured. For example “X (number) of ‘Y’ (number) students will demonstrate a 70% proficiency or better ...” For the example course:

ELEMENTARY ALGEBRA, TS113F

STUDENT LEARNING OUTCOME	ASSESSMENT METHOD	BENCHMARK
1. The student should be able to use the structure of algebra, properties of real numbers and the order of operations to work problems.	Test	75% of students will score 70% or better on the test. AND 75% of students will score 75% or better on the chapter summary.
2. The student should be able to solve linear equations and use the techniques to solve application problems.	Test and project	75% of students will score 70% or better on the test. AND 75% of students submitting a project will score a 3, 4 or 5 on all components of the rubric.
3. The student should be able to graph a linear equation and use details from a graph to write an equation.	Test and presentation	75% of students will score 70% or better on the test. AND 75% of students making a presentation will score at least a 7 on the rubric.
4. The student should be able to perform operations and simplify polynomial expressions.	Test	75% of students will score 70% or better on the test. AND 75% of students will score 75% or better on the chapter summary.
5. The student should be able to factor, solve, and set up quadratic expressions and equations.	Test and project	75% of students will score 70% or better on the test. AND 75% of students submitting a project will score a 3, 4 or 5 on all components of the rubric.

5. **Perform the assessment activities and analyze the results.** Once there are results for the assessment activities, record the data on the worksheet. (Reminder: See the end of this section for the course assessment worksheet.)

6. **Fill in your observations (results) and action plans.** In your observations, include whether or not the benchmark was met and an action plan. An action plan statement is required for all outcomes. If the benchmark was met or exceeded, you have the option to define different outcomes for subsequent semesters. If the benchmark was not met, you must create an action plan that describes what you will do differently in subsequent terms to improve student learning. Then follow through in the next term the class is offered. Submit the completed assessment forms to the OIE within 3 weeks of the end of the course.

Here is a completed form for the example course:

ELEMENTARY ALGEBRA, TS113F

OUTCOME NAME	OBSERVATION STATEMENT	Date	Benchmark met or not?	ACTION PLAN: What will you do to strengthen your course?	When will changes be evaluated?
1. The student should be able to use the structure of algebra, properties of real numbers and the order of operations to work problems.	75% of students scored 70% or better on the first test. AND 80% of students scored 75% or better on chapter summary.	2-5-10	Benchmark met	Even though the benchmark was met, many students struggled with identifying the correct property from an expression. In the next course those questions will change in format from multiple-choice to fill in the blank of an expression.	Fall 2010
2. The student should be able to solve linear equations and use the techniques to solve application problems.	60% of students scored 70% or better on the test. AND 55% of students scored 3 or better on the project.	2-24-10	Benchmark NOT met	Solving equations is normally a problem area. Both methods of assessment showed that students were below benchmark. Since this outcome involves word problems and standard equations, the test and project can be changed to highlight which area needs the most work. In the next semester the test will only have standard equations while the project will cover application problems.	Fall 2010
3. The student should be able to graph a linear equation and use details from a graph to write an equation.	50% of students scored 70% or better on the test. AND 80% of students scored 7 or better on the presentation.	3-15-10	Benchmark NOT met	Benchmark was met on the presentation, but not on the test. The presentation required pairs of students to demonstrate three methods of graphing for a given equation. Graphing is often a weak area due to a lack of detail. It is likely the presentations went well because students had partners to help remember the necessary details. Test scores may improve by providing a "checklist" for the graphs.	Fall 2010

OUTCOME NAME	OBSERVATION STATEMENT	Date	Benchmark met or not?	ACTION PLAN: What will you do to strengthen your course?	When will changes be evaluated?
4. The student should be able to perform operations and simplify polynomial expressions.	75% of students scored 70% or better. AND 75% of students scored 75% or better on chapter summary.	4-16-10	Benchmark met	Students did well overall, but they do need more practice with the rules of exponents.	Fall 2010
5. The student should be able to factor, solve, and set up quadratic expressions and equations.	55% of students scored 70% or better on the test. AND 40% of students scored 3 or better on the project.	4-28-10	Benchmark not met	Students probably did not do well on this outcome because of time at the end of the semester. Since factoring is an essential skill for the next courses the project will be dropped to allow time to focus on classroom practice for test preparation.	Fall 2010

The following page has the worksheets referred to in the process above.

Worksheets

Course set-up information: To be completed at the beginning of the course

Faculty Name _____

Course Name _____

Semester _____ Course Number and CRN Number _____

Outcome Name	Outcome Description	Assessment Method Category	Assessment Method Details	Benchmark	Notes/comments



Course assessment results: To be completed at the end of the course.

Faculty Name _____

Course Name _____

Semester _____ Course Number and CRN Number _____

Outcome Name	Observation Statement	Date	Benchmark met or not?	Action Plan: What will you do to strengthen your course?	When will changes be assessed?	Notes/comments

SECTION 3
GENERAL EDUCATION
ASSESSMENT

**General Education:
Definition Statement**
(Adopted: June 6, 2007)

General education is an important component of students' education at NMJC. In order to be a well-educated, successful, and valuable participant in the rapidly changing local, state, national, and global community students need to be conversant with a broad-based understanding of various educational disciplines. The general education core of the program of study for an associate degree or certificate helps students develop a greater understanding of themselves, of their relationship with others, and of the diverse world in which they live. The general education experience provides students with opportunities to explore broad areas of commonly held knowledge and prepares them to contribute to society through personal, social, and professional interactions with others. Upon completion of their degrees, these students will enter a world in which they can expect to hold different jobs and perhaps a series of careers over the course of their lives. In order to prepare for this exciting and challenging future, students will need to become familiar with past achievements, present developments, and future possibilities. During the course of their freshman and sophomore years, students should seek to enlarge their historical, aesthetic, cultural, literary, scientific, and philosophical perspectives, to improve their critical and analytical thinking, and to enhance their skills in locating, managing, and communicating information. The general education experience fosters students' personal development by exposing them to new directions, perspectives, and processes. To this end, the following Higher Education Department-approved general education components have been adopted by NMJC:

Area I: Communications

Area II: Mathematics/Algebra

Area II: Mathematics/Calculus I

Area II: Mathematics/Other College-Level Mathematics

Area III: Laboratory Science

Area IV: Social and Behavioral Science

Area V: Humanities and Fine Arts

State-Mandated Competencies

The New Mexico Higher Education Department has established competencies in each area of general education. For assessment purposes, instructors must assess all state-mandated competencies within their area(s). The competencies for each area of general education are as follows (see Appendix B for NM HED forms):

Area I: Communications Competencies

- Analyze and evaluate oral and written communication in terms of situation, audience, purpose, aesthetics, and diverse points of view
- Express a primary purpose in a compelling statement and order supporting points logically and convincingly
- Use effective rhetorical strategies to persuade, inform, and engage
- Employ writing and/or speaking processes such as planning, collaborating, organizing, composing, revising, and editing to create presentations using correct diction, syntax, grammar, and mechanics
- Integrate research correctly and ethically from credible sources to support the primary purpose of a communication
- Engage in reasoned civic discourse while recognizing the distinctions among opinions, facts, and inferences

Area II: Mathematics/Algebra Competencies

- Graph functions
- Solve various kinds of equations
- Demonstrate the use of function notation and perform operations on functions
- Model/solve real-world problems

Area II: Mathematics/Calculus I Competencies

- Demonstrate an understanding of the theoretical and geometrical underpinnings of the calculus
- Use concepts of function, limit, continuity, derivative, and integral
- Apply methods of calculus to optimization, graphing, and approximation
- Apply differential and integral calculus to problems in geometry, physics, and other fields

Area II: Mathematics/Other College-Level Mathematics Competencies

- Display, analyze, and interpret data
- Demonstrate knowledge of problem-solving strategies
- Construct valid mathematical explanations
- Display an understanding of the development of mathematics
- Demonstrate an appreciation for the extent, application, and beauty of mathematics

Area III: Laboratory Science Competencies

- Describe the process of scientific inquiry
- Solve problems scientifically
- Communicate scientific information
- Apply quantitative analysis to scientific problems
- Apply scientific thinking to real world problems

Area IV: Social and Behavioral Science Competencies

- Identify, describe, and explain human behaviors and how they are influenced by social structures, institutions, and processes within the contexts of complex and diverse communities
- Articulate how beliefs, assumptions, and values are influenced by factors such as politics, geography, economics, culture, biology, history, and social institutions
- Describe ongoing reciprocal interactions among self, society, and the environment
- Apply the knowledge base of the social and behavioral sciences to identify, describe, explain, and critically evaluate relevant issues, ethical dilemmas, and arguments

Area V: Humanities and Fine Arts Competencies

- Analyze and critically interpret significant primary texts and/or works of art(fine art, literature, music, theatre, or film)
- Compare art forms, modes of thought and expression, and processes across a range of historical periods and/or structures (political, geographic, economic, social, cultural, religious, and intellectual)
- Recognize and articulate the diversity of human experience across a range of historical periods and/or cultural perspectives
- Draw on historical and/or cultural perspectives to evaluate any or all of the following: contemporary problems/issues, contemporary modes of expression, and contemporary thought

General Education Courses

New Mexico Junior College has established the following procedures to evaluate its general education courses on a rotational schedule. Assessment activities for each general education course are reported once every three years. Results are submitted to the Office of Institutional Effectiveness (OIE). Courses needing follow will be reassessed between rotations. The table below shows the three-year rotation of the assessment:

Three-Year Rotation

First Rotation – (starts Fall 2010/Spring 2011)

Area I: Communications	Area II: Mathematics	Area III: Laboratory Sciences	Area IV: Social/Behavioral Sciences	Area V: English/Humanities Fine Arts
EN 113	MA 113	BI 114	EC 213	MU 213
EN 123	MA 144	BI 124	EC 223	MU 213A
EN 123A	MA 113B	BI 134	GO 213	MU 223A
		BI 144	GO 233	DR 113

Second Rotation – (starts Fall 2011/Spring 2012)

Area I: Communications	Area II: Mathematics	Area III: Laboratory Sciences	Area IV: Social/Behavioral Sciences	Area V: English/Humanities Fine Arts
SE 113	MA 154	CH 114	PS 113	EN 213
SE 123	MA 113D	CH 114A	PS 213	EN 213A
		CH 124A	PS 213B	EN 213C
		PH 114A	PS 213F	EN 213D
			PS 223	EN 213E
			AN 123	EN 213F
				EN 213G
				EN 223
				EN 223A
				EN 223C
				EN 223D
				AR 113
				SP 114
				SP 124

Third Rotation – (starts Fall 2012/Spring 2013)

Area I: Communications	Area II: Mathematics	Area III: Laboratory Sciences	Area IV: Social/Behavioral Sciences	Area V: English/Humanities Fine Arts
none	MA 234	GE 114	GG 113	HI 113
	MA 123	GE 124	SO 213	HI 113A
		PH 114	SO 223	HI 123
		PH 124	SO 223W	HI 213
		PH 214		HI 223
		PH 224		PI 213
				PI 223
				RE 113

During the indicated year, all professors teaching general education course(s) evaluate all sections of the course as listed in the rotation schedule, using a methodology from the New Mexico Higher Education Department. This methodology requires professors to indicate for each outcome: 1) how the outcome was assessed 2) what the assessment results are 3) how assessment results will be used to make changes in course(s). Each professor will send assessment results to the OIE for entry into TracDat. The results are then forwarded to the Vice President for Instruction for compilation. By September 30th, the Vice President for Instruction will forward the final report to the Instructional Deans, the faculty, the President and to the New Mexico Higher Education Department.

Process for General Education Assessment

1. **Set up the courses specified in the rotation schedule.** The process for general education assessment is basically the same as for course assessment. However, student learning outcomes are not written by the instructor. The student learning outcomes will be the competencies determined by NMHED (given above and in the forms below). Instructors should be prepared to assess any general education courses they are teaching, based on the rotation schedule. If there are any general education courses from a previous term which need follow up, assessment for those courses needs to continue, in addition to new courses on the rotation. This process of assessing, implementing action plans and reassessing establishes a loop that must be maintained to demonstrate improvement of student learning. For courses that have several sections taught by different instructors it is helpful if assessment methods and benchmarks can be coordinated.
2. **Determine how you will assess each competency.** Assessment methods include projects, essays, tests, presentations, research papers etc. Each outcome must have at least one assessment method. Ideally, when applicable, a rubric should be created to demonstrate the desired student performance with the assessment method. Final grades for a course are NOT a measurement for assessment purposes.
3. **Set a benchmark for each assessment method on each competency.** A benchmark is a standard by which something can be measured. For example “X (number) of ‘Y’ (number) students will demonstrate a 70% proficiency or better ...”
4. **Perform the assessment activities and analyze the results.** Results for assessment activities are recorded on the worksheet. (See the end of this section for the general education assessment worksheets.)
5. **Fill in your observations (results) and action plans.** Observations should include whether or not the benchmark was met and an action plan. An action plan statement is required for all competencies. The action plan statement should answer the question, “How will results be used to make improvements?” If the benchmark was met, you still must create an action plan that describes any changes you intend to make in subsequent terms. Be sure to follow through in the next term the class is offered.
6. **Submit the completed assessment forms to OIE within 3 weeks of the end of the course** (see Appendices for NM HED forms):

SECTION 4
DEPARTMENT/PROGRAM
ASSESSMENT

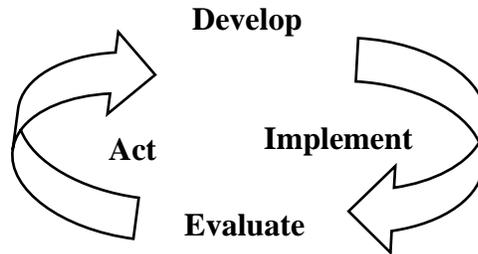
Development of Department/Program Assessment

The previous two sections outlined the assessment process for individual courses. This section offers guidance for all instructors in a department/program who will be working together. At this level of assessment, an assessment method is created for use by all instructors in a specific department/program to allow compiling of data to report on the department/program as a whole. The outcomes or objectives are set by the faculty in the department/program. They are not necessarily the same as specific course objectives. The first step in department/program assessment is to meet with all other instructors in the areas.

Successful department/program assessment plan should:

1. Involve input and discussion by all faculty members, including adjunct faculty.
2. Develop around the department as a whole and allow the individual courses to support the plan.
3. Define departmental outcomes that support the institutional student learning outcomes and the mission statement of the college.
4. Incorporate ongoing, flexible, and long-range strategies.
5. Include multiple assessment activities in the normal course of class sessions, department meetings, and in-service activities.
6. Evolve in stages.
7. Utilize all faculty (and consider external assessors) in the evaluation of assessment results.
8. Create meaningful conversations and positive changes based on assessment results.

Overview of Department/Program Assessment



1. Develop the department/program learning outcomes (goals).
2. Identify possible assessment methods. Evaluate and select appropriate methods.
3. Set benchmarks to assess the learning outcomes.
4. Develop a plan and timeline for carrying out the assessment.
5. Implement the assessment.
6. Evaluate the results.
7. Determine an action plan based on the results.
8. Document and communicate results with appropriate stakeholders.
9. Implement changes based on the action plan and assess the success of the changes.

Process for Departmental Assessment Plan

- 1. Develop departmental student learning outcomes (goals).** This is similar to writing student learning outcomes as stated in section 2. However, department/program learning outcomes need to be broader to represent the entire sequence of courses a student must take to complete required credits in a specific area. Department/program student learning outcomes need to answer the question, “Students who successfully complete the courses in this department/program should be able to...” When developing these learning outcomes consider the NMJC institutional student learning outcomes (see section 5). Every course offered will support one or more of the three institutional outcomes. Department/program outcomes should reflect this connection. If the department includes general education courses, the general education competencies can be adopted as the department outcomes. Use the form at the end of this section to list 5-7 department/program student learning outcomes.
- 2. Identify and select appropriate assessment methods for the department/program.** Methods selected will be implemented in individual courses, but data will be compiled for department/program wide results. Each outcome will have a corresponding method of assessment. However, it is not necessary to assess every outcome each semester. The department/program can set up a plan to accomplish the assessment of each outcome on a rotation basis. Some outcomes require follow up, so a plan must be established to accommodate re-assessment and progress through each outcome. Assessment methods include projects, essays, tests, presentations, research papers, pre and post tests, surveys, etc. It is a good idea to develop a rubric showing criteria for work that has exceeded, met, or is below certain standards. Developing a rubric will help insure consistent analysis of data between instructors in the area.
- 3. Set benchmarks to assess learning outcomes.** A benchmark will be set for each assessment method on each outcome. A benchmark is a standard by which something can be measured. For example “X (percent) of students will demonstrate a 70% proficiency or better ...”
- 4. Develop a plan and timeline for carrying out assessments.** It is not necessary to assess each outcome each semester. It is necessary to set up a plan to assess each outcome within a reasonable amount of time. Questions to consider:
 - How many courses will be assessed?
The assessment committee recommends at least three courses each academic year. This may include assessing one or two outcomes in multiple courses.
 - When will assessment activities occur (how often, what time of semester/year)?
 - Who will be involved in administering, scoring, evaluating, and reporting the assessment? Everyone in the department/program should play an equal role, but it is helpful to designate one individual as the coordinator or “scribe” for the assessment activities. This person will call instructors together to compile and analyze data so he or she can report results.

5. **Implement assessment.** Adjunct faculty should be included in assessment activities to insure the data is representative of the entire department/program. If possible, adjunct faculty can participate in the assessment planning process.
6. **Evaluate results. All instructors in the area should participate in data analysis.** Analyzing the results helps faculty make important decisions regarding (but not limited to) curriculum changes, pedagogy considerations, resource allocations, and course sequencing. It is advisable to name one or two people to coordinate meetings, collect data, and fill in the form to be submitted on behalf of the department/program.
7. **Determine an action plan based on results obtained.** The action plan is developed from the evaluation and discussion within the department. For example the decision may be to continue the assessment method on the same outcome to establish a base pattern before making changes. The decision could also be to implement some corrective action with reassessment of the outcome to determine if results do improve. Action plans should be detailed and include any needed follow-up. Subsequent assessment activities should reflect back on changes made and results observed.

Steps 8 and 9- These are the steps most assessment plans lack. Assessment begins by asking, "What are the most important learning outcomes for students to achieve?" It continues through a process of assessing, implementing action plans and assessing again. This establishes a loop that must be maintained to demonstrate improvement of student learning.

8. **Document and communicate results with appropriate stakeholders.** Summarize assessment results in the form provided (below) and submit them to the OIE. Results may be shared with others as appropriate. Results are not to be used for faculty evaluation. Finding gaps in learning can be positive, because a need for improvement is recognized. Making incremental, but continuous improvements in programs can begin to close those gaps. Results should be submitted no later than Friday of the in-service week for the new semester. This allows time for all members in the area to meet and discuss the results and action plan.
9. **Implement action plan and assess success of changes.** Remember all instructors in the department/program should participate in assessment decisions.

The following page is the form for department/program assessment.

Worksheets

Department/Program Assessment Plan information:

To be completed at the end of each semester in preparation for the coming semester.

Semester _____ Department/Program Name _____

Department Outcome Name	Outcome Description	Assessment Method Category	Assessment Method Details	Benchmark	Notes/comments



Department/Program Assessment Results information:

To be completed at the beginning of each semester using information collected the previous semester.

Semester _____ Department/Program Name _____

Department Outcome Name	Observation Statement	Date	Benchmark met or not?	Action Plan: What will you do to strengthen the department?	When will changes be assessed?	Notes/comments

SECTION 5
INSTITUTIONAL ASSESSMENT

Institutional Outcomes Defined

This final section discusses NMJC's process for institutional assessment and the role of individual faculty in that process. It is important to understand the three student learning outcome or goals defined by the Student Learning Outcomes Assessment Committee (SLOAC) on behalf of NMJC. The outcomes are that NMJC will produce students who: 1) communicate effectively 2) think critically and solve problems successfully and, 3) value productive interactions between themselves and their community. These goals will be accomplished through effective teaching in classes across campus supporting these outcomes. Following is detailed information about the assessment process to measure these three outcomes.

Student Learning Outcomes Statement

Student learning outcomes are knowledge and abilities achieved by students graduating with an Associate Degree from NMJC. Students will achieve these outcomes as well as the specific curriculum outcomes for their area of study.

NMJC has adopted three institutional student learning outcomes, which are the following:

Communication

The student is able to:

- Comprehend information to summarize, analyze, evaluate, and apply to a specific situation.
- Communicate in an accurate, correct, and understandable manner.

Critical Thinking and Problem Solving

The student is able to:

- Define a problem and arrive at a logical solution.
- Use appropriate technology and information systems to collect, analyze, and organize information.
- Apply critical thinking, analysis, and problem solving to data.

Self and Community

The student is able to:

- Analyze and reflect on the ethical dimensions of legal, social, and/or scientific issues.
- Communicate an awareness of a variety of perspectives of ethical issues.
- Interact with individuals and within groups with integrity and awareness of others' opinions, feelings, and values.

Process for Institutional Assessment

Collection of Artifacts

Student work will be collected from selected courses each semester. The primary responsibility of all instructors for institutional assessment is being prepared to provide artifacts from any class taught for an applicable outcome. SLOAC is charged with coordinating the collection of student artifacts for scoring by the Communication Scoring Team, the Critical Thinking and Problem Solving Scoring Team, and the Self and Community Scoring Team. The process for collecting and scoring artifacts is as follows:

- During the last month of the fall and spring semesters, a set of randomly chosen classes will be generated by the Vice President for Instruction to select those classes that will be responsible for producing the upcoming semester's artifacts (evidences of student work).
- Professors of said classes will be notified immediately by the Scoring Team Liaison.
- Before the end of the selected semester, the liaison from SLOAC will collect the artifacts and deliver them to the OIE. (**NOTE:** Professors will need to postpone grading the students' work until after copies are made by the OIE for the scoring team. This takes about one day.)
- OIE will randomly select 30-50 items from all collected for the scoring team.
- Three copies of each artifact will be delivered to the SLOAC liaison. The liaison will deliver the copies to the scoring team for evaluation the next semester.

Instructor Responsibilities & Scoring Teams

1. **Embed assignments in each class to address appropriate institutional outcome(s).** Every class taught at NMJC addresses at least one institutional outcome (see Institutional Assessment Course Matrix). Every instructor should be familiar with which outcome(s) his/her course addresses *and* be ready to supply artifacts during any semester that address defined criteria. The criteria for each outcome are clearly stated in a rubric, which was created and adopted by the SLOAC (see rubrics for Communications, Critical Thinking and Problem Solving, and Self and Community). It is important that instructors familiarize themselves with the rubrics and understand how a scoring team will evaluate student artifacts. When an instructor is contacted to supply artifacts, he/she should have already designed and embedded an assignment into the course that can be collected/used to evaluate an institutional student learning outcome. Instructors can contact a member of SLOAC for assistance creating appropriate assignments.
2. **Provide detailed instructions for assignments.** Scoring teams can more accurately evaluate student work if the instructions given to students are included with the artifacts. Detailed instructions should be written to accompany student work given to the liaison. When contacted by a liaison from SLOAC, simply respond with information about an assignment to be used, approximately how many artifacts can be expected, and when during the semester the assignment will be given.
3. **When student work is completed contact liaison before grading.** The scoring team will need to evaluate student work without instructor markings. Contact the SLOAC liaison, and he/she will take the artifacts to OIE where a set of copies will be made so original work can be promptly returned to the instructor. Remember to include instructions for the assignment. Artifacts viewed by the scoring teams will have all student identification removed.

4. **Be willing to serve on a scoring team.** Another responsibility of faculty in the institutional assessment process is to serve on a scoring team for any of the three outcomes. Each scoring team is made up of 3 faculty members from different areas, not to include current members of the assessment committee. Instructors can serve on a scoring team for an outcome that is not part of what they teach. The term of service on a scoring team is two consecutive traditional semesters. The SLOAC liaison provides necessary information about duties of the scoring team. Results generated by scoring teams are submitted to OIE for analysis. Then SLOAC discusses results and presents findings to the faculty. Faculty input is solicited for action plans to improve student learning.

Next are the following documents:

- Institutional Assessment Course Matrix.
- Rubric for Communication outcome.
- Rubric for Critical Thinking and Problem Solving outcome.
- Rubric for Self and Community outcome.
- Survey for Self and Community outcome.

Institutional Assessment Course Matrix

NMJC Course			Communication	Critical Thinking	Self and Community
Accounting					
AC 114	AC 124	AC 213		X	
Anthropology					
AN 123			X	X	X
Art					
AR 113	AR 113B				X
Architecture					
ARCH 143					X
ARCH 213A				X	
ARCH 233A			X		
Automotive Technology – Ford Motors					
FM 124	FM 124B	FM 124D		X	
FM 214A	FM 214B	FM 214C			
FM 223	FM 224	FM 224B			
FM 124A					
Automotive Technology – General Motors					
GM 124B	GM 124	GM 124A		X	
GM 214	GM 214A	GM 124C			
GM 224					
Biology					
BI 114	BI 124	BI 134	X	X	
BI 144					
BI 214A				X	
BI 224A					
Business					
BU 233			X		
Chemistry					
CH 114	CH 114A	CH 124A		X	
CH 214	CH 224		X	X	
Computer Science					
CS 113	CS 113B	CS 113C		X	
CS 123D	CS 213G	CS 123G			
CS 213D	CS 213F	CS 213J			
CS 213N	CS 213C	CS 213			
CS 214	CS 214A	CS 214B			
CS 214C	CS 223L	CS 223M			
CS 223N	CS 233M	CS 233N			
CS 243N					
CS 113D	CS 223S	CS 233S	X	X	
Drama					
DR 113					X
Economics					
EC 213	EC 223			X	
Education					
ED 112	ED 112A	ED 113A	X		
ED 113B	ED 123	ED 212			
ED 213	ED 213C	ED 213G			
ED 222	ED 223C	ED 223D			

NMJC Course			Communication	Critical Thinking	Self and Community
Engineering Drafting					
EG 123	EG 223A	EG 114C		X	
EG 113	EG 222	EG 133			
EG 243A					
English					
EN 113	EN 123	EN 123 A	X		
EN 213	EN 213A	EN 213C			
EN 213D	EN 213E	EN 213F			
EN 213G	EN 223	EN 223A			
EN 223C	EN 223D				
Geography					
GG 113			X	X	X
Geology					
GE 114	GE 124	GE 194	X	X	
Government					
GO 213	GO 233		X	X	
History					
HI 113	HI 123	HI 213	X	X	
HI 213M	HI 223	HI 223W			
HI 113A			X	X	X
Interior Design					
ID 213D				X	
Speech/Communications					
SE 113	SE 123	SE 213A	X		
Math					
MA 113	MA 113A	MA 113B		X	
MA 113D	MA 114B	MA 123			
MA 144	MA 154	MA 234			
Music					
MU 213					X
MU 213A	MU 223A		X		X
Philosophy					
PI 213			X		X
Physical Education					
PY 111H*	PY 101	PY 101C			X
PY 111	PY 111A	PY 111B			
PY 111C	PY 111I	PY 111L			
PY 111N	PY 111S	PY 111U			
PY 111Y	PY 121A	PY 121D			
PY 121G	PY 121H	PY 121J			
PY 121K	PY 121L	PY 121N			
PY 121R	PY 121U	PY 131A			
PY 131B	PY 131C	PY 131D			
PY 131E	PY 131F	PY 131G			
PY 131J	PY 131P	PY 131R			
PY 141	PY 141T	PY 211E			
PY 211G	PY 211H	PY 211K			
PY 221G	PY 221H	PY 221U			
PY 241T					

NMJC Course			Communication	Critical Thinking	Self and Community
Physics					
PH 114 PH 224	PH 124	PH 214	X	X	
PH 11	PH 114A	PH 114C		X	
Psychology					
PS 113 PS 223	PS 213 PS 223B	PS 213B	X	X	X
PS 213A	PS 213F		X		
PS 223A					X
Religion					
RE 113					X
Sociology					
SO 213 SO 223W	SO 223 SO 233	SO 223B	X	X	X
SO 223C			X	X	
Spanish					
SP 103 SP 214	SP 114 SP 224	SP 124	X		

INSTITUTIONAL COMMUNICATION OUTCOME Scoring Rubric

The student is able to

- Comprehend information to **summarize**, analyze, evaluate, and apply to a specific situation.
- Communicate in an accurate, **correct**, and **understandable** manner.

The Student Learning Outcomes Assessment Committee thanks you for participating in the scoring process for our institutional portfolio. At this time, we are focusing **only** on the following components of the communication outcome:

1. Summarize -Information is **expressed in a concise way**
2. **Correct** - Information is **structured** and **organized**
3. Information is **well-developed** with **content appropriate** to the assignment's purpose.

Directions for Scorer:

1. Read the student activity completely through. It is not necessary to mark every error you find. However, you can make notes on the activity if you wish.
2. After you read your student activity, circle the rating below in the Communication Rubric that best describes your view of the student's communication skill level.
3. **Only** one scoring rubric per artifact is to be submitted for analysis.

Communication Rubric

1. Information is expressed in a concise way	Exemplary	Proficient	Moderate	Developing	Beginning
2. Information is structured and organized	Exemplary	Proficient	Moderate	Developing	Beginning
3. Information is well developed with content appropriate to the assignment's purpose.	Exemplary	Proficient	Moderate	Developing	Beginning

Written Assignments:

Student work appropriate for the COMMUNICATION outcome will ask students to do the following in an essay format that includes an introduction, body, and conclusion:

1) demonstrate how students were able to comprehend information to summarize, analyze, evaluate and apply to a specific situation, and 2) communicate in an accurate, correct, and understandable manner. Written student work should be two to five pages in length.

Expected Outcomes (or Standards):

At least 75% of the Communications artifacts will score 3 or higher on all components.

Holistic Scoring Suggestions for Scoring Team

1. When you begin reading, place your expectations at the level of “moderate.” Expect the essay to explore a topic, to present an opinion (without saying “In my opinion”), to contain an introduction, body, and conclusion, and to follow the assignment instructions.
2. After reading the essay, ask yourself this question: Did the essay meet my expectations, exceed my expectations, or fall below my expectations?

If it is brilliant in every way, then it is “exemplary.”

If it exceeds your expectations, then it is probably “proficient.”

If the paper meets your expectations, then it is “moderate.”

If it falls beneath your expectations, then it is probably “developing.”

If a paper is extremely weak, then it is “beginning.”

Typically, the majority of the essays will be “developing,” “moderate,” or “proficient.” It is uncommon to read an “exemplary” paper. Sadly, it is not as uncommon to see a paper that is “beginning.”

3. Consider the following definitions:

Exemplary = Excellent. The paper exceeds all expectations. It is uncommon to see a paper fall into this category. (If you read an exemplary essay, you will know it.)

Proficient = Strong. The essay shows control and skill in the trait under consideration.

Moderate = Competent. In a competent paper, the strengths outweigh the weaknesses, yet some revision is needed.

Developing = Weak. At this level, weaknesses outweigh strengths, yet isolated points hint at what the writer has in mind.

Beginning = Very weak. The essay is simply incoherent. The writer shows no control.

Communication Scoring Scenarios

Component #1: Information is expressed in a concise way.

Achieving excellence in this area is rare. An “exemplary” paper would be tight in every way. It would not contain errors in the following areas: spelling, grammar, sentence construction. It might contain one or more minor punctuation errors, diction errors, or syntax errors.

A “proficient” paper may contain some repetition of ideas and/or minor errors in the areas of sentence construction, diction, syntax, grammar, and spelling.

If an assignment contains numerous run-on sentences and/or fragments, grammatical mistakes, or spelling errors, then it is not exemplary, proficient, or moderate.

Component #2: Information is structured and organized.

If the essay does not contain an introduction, body, and conclusion, then it is not exemplary, proficient, or moderate—regardless of the strength of ideas contained within the essay. (One long paragraph is not an essay.)

An “exemplary” essay has clear and appropriate beginning, development and conclusion. Paragraphing and transitions are also clear and appropriate.

A “proficient” essay has adequate beginning, development and conclusion. Paragraphing and transitions are also adequate.

The “moderate” essay has weak beginning, development and conclusion. Paragraphing and transitions are also deficient.

The “developing” essay has serious and persistent errors in organizational structure and paragraphing, while the “beginning” essay has no paragraph organization with little to no evidence of a beginning, development or conclusion.

Component #3: Information is well-developed with content appropriate to the assignment’s purpose.

An “exemplary” essay has a clearly stated thesis that addresses the purpose of the assignment. The work provides in-depth coverage of the topic and the ideas are clearly supported by evidence.

A “proficient” essay states the thesis and purpose clearly, but the ideas are not as original or as consistently supported by the evidence.

A “moderate” essay states the thesis and purpose fairly clearly and is appropriate to the assignment’s purpose, but some details or examples are not appropriate or supported.

In a “developing” essay, the thesis and purpose are somewhat vague or only loosely related to the writing task. Details may be too general, irrelevant, or inappropriately repetitive.

A “beginning” essay has no purpose or thesis and offers simplistic, undeveloped, or off-topic ideas.

See Appendix A – Communication Faculty Resource Toolbox.

CRITICAL THINKING AND PROBLEM SOLVING OUTCOME

Scoring Rubric

The student is able to:

- Define a problem and arrive at a logical solution.
- Use appropriate technology and information systems to collect, analyze, and organize information.
- Apply critical thinking, analysis, and problem solving to data.

Directions for Scorers: Please review the outcome below. As you read the student artifact, circle the rating that you determine best describes the skill level on the **four** components indicated on the rubric below. The four components were selected by the professor submitting the artifacts. Only **one** scoring rubric per artifact is to be submitted from the scoring team for analysis.

Components		Skill Level				
1.	Define a problem	Exemplary	Proficient	Moderate	Developing	Beginning
2.	Use appropriate technology and information systems	Exemplary	Proficient	Moderate	Developing	Beginning
3.	Collect information	Exemplary	Proficient	Moderate	Developing	Beginning
4.	Analyze information	Exemplary	Proficient	Moderate	Developing	Beginning
5.	Organize information	Exemplary	Proficient	Moderate	Developing	Beginning
6.	Apply to a specific situation	Exemplary	Proficient	Moderate	Developing	Beginning
7.	Arrive at a logical solution	Exemplary	Proficient	Moderate	Developing	Beginning

Scoring Guidelines

Exemplary = Excellent. Demonstrates a mastery that exceeds expectations.

Proficient = Strong. Demonstrates control and skill.

Moderate = Competent. Revision is needed however, strengths outweigh the weaknesses.

Developing = Weak. Weaknesses outweigh strengths, yet isolated points hint at what the student has in mind.

Beginning = Very weak. Shows no mastery of critical thinking skill.

Written Assignments:

Artifacts should provide an opportunity for the student to demonstrate critical thinking or problem solving skills and require the student to perform at least *four* of the following:

1. Define a problem
2. Use appropriate technology and information systems
3. Collect information
4. Analyze information
5. Organize information
6. Apply to a specific situation
7. Arrive at a logical solution

Assignments that provide an opportunity for the student to articulate a problem to be solved and describe and explain the process of solving the problem would be appropriate.

Assignments which might provide the required information could be a research paper, semester project, any assignment involving some problem solving/data collection process, or perhaps an essay question on a test.

Expected Outcomes (or Standards):

At least 75% of the Critical Thinking and Problem Solving artifacts will exhibit a moderate skill level on 3 or more of the 4 components.

SELF AND COMMUNITY OUTCOME

Scoring Rubric

The student should be able to:

- Analyze and reflect on the dimensions of legal, social, and/or scientific issues with regard to self and community.
- Communicate an awareness of multiple perspectives concerning community issues.
- Interact with individuals and within groups with integrity and awareness of others' opinions, feelings, and values.

Directions for scorers:

Please review the outcome. As you score the student artifact, circle the rating that you determine best describes the skill level on the components that apply to the artifact as indicated on the rubric below. Only **one** scoring rubric is to be submitted from the scoring team for analysis per artifact.

Part 1: Analyze and reflect on the dimensions of legal, social, and/or scientific issues with regard to self and community.

Skill Level	Components
3 Exemplary	<ul style="list-style-type: none"> • The student's work analyzes contrasting perspectives of the issue/s • Student's work objectively and thoroughly examines all sides of the issue/s. • If applicable the student's position should be clearly communicated.
2 Proficient	<ul style="list-style-type: none"> • The student's work identifies some sides of the issue/s. • Student's work addresses some sides of the issue subjectively, but lacks detailed explanations.
1 Developing	<ul style="list-style-type: none"> • The student's work identifies one side of the issue/s. • Student's work states only one side of the issue subjectively and without detail.
0 Beginning	<ul style="list-style-type: none"> • Student's work does not identify or address any issues.

Part 2: Communicate an awareness of multiple perspectives concerning community issues.

Skill Level	Components
3 Exemplary	<ul style="list-style-type: none"> • The student's work describes contrasting perspectives of issue/s. • Student's work should objectively compare and contrast a variety of perspectives of the issue/s.
2 Proficient	<ul style="list-style-type: none"> • The student's work identifies and defines some perspectives of the issue/s.
1 Developing	<ul style="list-style-type: none"> • The student's work lists some perspectives of the issue/s.
0 Beginning	<ul style="list-style-type: none"> • Student's work does not identify or address any issues.

APPENDICES

Student Learning Outcomes Assessment Schedule

Check list for assessment activities EACH semester.

Start of Semester	When	What	Notes
	By Friday of In-service week	Submit course assessment plans for at least two (2) courses including outcomes, methods and benchmarks – OR – Submit your assessment plan for your General Education courses including methods and benchmarks.	Be sure to track your progress on a current action plan or set a new action plan if a loop has been closed.
	By Friday of In-service week	Submit results for Department/Program assessment of the previous semesters (spring, May, summer OR fall and winter semester).	Include a statement of progress on a current action plan or describe a new plan if a loop has been closed.
	By Friday of In-service week	If you were contacted by a SLOAC liaison to submit artifacts for Institutional assessment in the coming semester you need to respond with your plans for collection of artifacts.	Review the Institutional rubric provided to you for assistance in setting up an appropriate assignment.
End of Semester	When	What	Notes
	By Friday of Final Exams week	Submit Department/Program plans for coming spring semester. Include outcomes, methods and benchmarks.	Also, keep track of the current action plan.
	By Friday of Final Exams week	If you were to collect artifacts for Institutional assessment make sure you have submitted the artifacts to the SLOAC liaison.	This can be done at any point in the semester when the student work has been completed.
	By Friday of Final Exams week	If you were contacted by a SLOAC liaison to submit artifacts for Institutional assessment in the coming semester you need to respond with your plans for collection of artifacts.	Review the Institutional rubric provided to you for assistance in setting up an appropriate assignment.
	Within 3 weeks of the final grade deadline	Submit course assessment and general education assessment results.	Include the action plans. If a previous plan is still in use state your progress and why the plan is not changing. If a new plan is needed describe it.

Core Competencies Assessment 2009-2010: Area I Courses

(Place University/College Name here)		Communications Competencies		
(Place University/College Course Number and Name here)		(Place New Mexico Common Core Number here)		
<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
<p>1. Students will analyze and evaluate oral and written communication in terms of situation, audience, purpose, aesthetics, and diverse points of view. Students should: Understand, appreciate, and critically evaluate a variety of written and spoken messages in order to make informed decisions.</p>				
<p>2. Students will express a primary purpose in a compelling statement and order supporting points logically and convincingly. Students should: Organize their thinking to express their viewpoints clearly, concisely, and effectively.</p>				
<p>3. Students will use effective rhetorical strategies to persuade, inform, and engage. Students should: Select and use the best means to deliver a particular message to a particular audience. Rhetorical strategies include but are not limited to modes (such as narration, description, and persuasion), genres (essays, web pages, reports, proposals), media and technology (PowerPoint™, electronic writing), and graphics (charts, diagrams, formats).</p> <p align="center">(Continued)</p>				

Core Competencies Assessment 2009-2010: Area I Courses, cont.

(Place University/College Name here)

(Place University/College Course Number and Name here)

Communications Competencies, cont.

(Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
<p>4. Students will employ writing and/or speaking processes such as planning, collaborating, organizing, composing, revising, and editing to create presentations using correct diction, syntax, grammar, and mechanics. Students should: Use standard processes for generating documents or oral presentations independently and in groups.</p>				
<p>5. Students will integrate research correctly and ethically from credible sources to support the primary purpose of a communication. Students should: Gather legitimate information to support ideas without plagiarizing, misinforming or distorting.</p>				
<p>6. Students will engage in reasoned civic discourse while recognizing the distinctions among opinions, facts, and inferences. Students should: Negotiate civilly with others to accomplish goals and to function as responsible citizens. End -- Area I</p>				

Area I Assessment Contact Person _____
Name

_____ Date

Phone number _____

Core Competencies Assessment 2009-2010: Area II Courses

(Place University/College Name here)

Mathematics – Algebra Competencies

(Place University/College Course Number and Name here)

(Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
<p>1. Students will graph functions Students should:</p> <ul style="list-style-type: none"> a. Sketch the graphs of linear, higher-order polynomial, rational, absolute value, exponential, logarithmic, and radical functions. b. Sketch a graph using point plotting and analysis techniques, including basic transformations of functions such as horizontal and vertical shifts, reflections, stretches, and compressions. c. Determine the vertex, axis of symmetry, maximum or minimum, and intercepts of a quadratic equation. 				
<p>2. Students will solve various kinds of equations. Students should:</p> <ul style="list-style-type: none"> a. Solve quadratic equations using factoring, completing the squares, the square root method, and quadratic formula. b. Solve exponential and logarithmic equations. c. Solve systems of two or three linear equations. <p align="center">(Continued)</p>				

Core Competencies Assessment 2009-2010: Area II Courses, cont.

(Place University/College Name here)

(Place University/College Course Number and Name here)

Mathematics – Algebra Competencies, cont.

(Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/ Priorities
<p>3. Students will demonstrate the use of function notation and perform operations on functions. Students should:</p> <ul style="list-style-type: none"> a. Find the value of a function for a given domain value b. Add, subtract, multiply, divide and compose functions. c. Determine the inverse of a function. d. Compute the difference quotient for a function. e. Correctly use function notation and vocabulary related to functions, i.e. domain, range, independent variable, of, even symmetry, etc. 				
<p>4. Students will model/solve real-world problems. Students should:</p> <ul style="list-style-type: none"> a. Use and understand slope as a rate of change. b. Use equations and systems of equations to solve application problems. c. Apply knowledge of functions to solve specific application problems. d. Solve compound interest problems. e. Solve application problems involving maximization or minimization of a quadratic function. f. Solve exponential growth and decay problems. <p style="text-align: center;">End – Area II - Algebra</p>				

Area II-Algebra Assessment Contact Person _____

Name

Date

Phone number _____

Core Competencies Assessment 2009-2010: Area II Courses, cont.

(Place University/College Name here)

Mathematics - Calculus I Competencies

(Place University/College Course Number and Name here)

(Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/ Priorities
<p>1. Students will demonstrate an understanding of the theoretical, geometrical underpinnings of the calculus. Students should: Algebraically and graphically demonstrate an understanding of:</p> <ul style="list-style-type: none"> a. Limit b. Tangent line c. Difference quotient d. Fundamental theorem of calculus e. Riemann sums 				
<p>2. Students will use concepts of function, limit, continuity, derivative, and integral. Students should: Apply the theory of calculus through manipulations involving:</p> <ul style="list-style-type: none"> a. The finding of limits. b. Using differentiation techniques. c. Working with transcendental & trigonometric functions. d. Determining points of discontinuity and intervals of continuity. <p align="center">(Continued)</p>				

Core Competencies Assessment 2009-2010: Area II Courses, cont.

(Place University/College Name here)

Mathematics - Calculus I Competencies, cont.

(Place University/College Course Number and Name here)

(Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
<p>3. Students will apply methods of calculus to optimization, graphing, and approximation. Students should be able to:</p> <ul style="list-style-type: none"> a. Find extreme points. b. Understand the graphs of a function and its 1st and 2nd derivatives and how they relate. c. Apply Newton’s method. d. Use differentials to approximate functions. 				
<p>4. Students will apply differential and integral calculus to problems in geometry, physics, and other fields. Students should:</p> <ul style="list-style-type: none"> a. Understand that calculus has many uses in science, business, and other fields. b. Students should be able to solve application problems involving rates of change, optimization, related rates, and acceleration/velocity. <p>End Area II – Calculus I</p>				

Area II-Calculus I Assessment Contact Person _____
Name

_____ Date

Phone number _____

Core Competencies Assessment 2009-2010: Area II Courses, cont.

(Place University/College Name here)
(Place University/College Course Number and Name here)

Mathematics – Other College-Level Mathematics Competencies
(Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
<p>1. Students will display, analyze, and interpret data. Students should:</p> <ul style="list-style-type: none"> a. Discriminate among different types of data displays for the most effective presentation. b. Draw conclusions from the data presented. c. Analyze the implication of the conclusion to real life situations. 				
<p>2. Students will demonstrate knowledge of problem-solving strategies. Students should:</p> <ul style="list-style-type: none"> a. For a given problem, gather and organize relevant information. b. Choose an effective strategy to solve the problem c. Express and reflect on the reasonableness of the solution to the problem. <p align="center">(Continued)</p>				

Core Competencies Assessment 2009-2010: Area II Courses, cont.

(Place University/College Name here)

Mathematics – Other College-Level Mathematics Competencies, cont.

(Place University/College Course Number and Name here)

(Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
<p>3. Students will construct valid mathematical explanations. Students should: Use mathematics to model and explain real life problems.</p>				
<p>4. Students will display an understanding of the development of mathematics. Students should: Recognize that math has evolved over centuries and that our current body of knowledge has been built upon contributions of many people and cultures over time.</p>				
<p>5. Students will demonstrate an appreciation for the extent, application, and beauty of mathematics. Students should: Recognize the inherent value of mathematical concepts, their connection to structures in nature, and their implications for everyday life.</p> <p>End – Area II Other Math</p>				

Area II-Other Math Assessment Contact Person _____
Name

_____ Date
Phone number _____

Core Competencies Assessment 2009-2010: Area III Courses

(Place University/College Name here)

Laboratory Science Competencies

(Place University/College Course Number and Name here)

(Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
<p>1. Students will describe the process of scientific inquiry. Students should:</p> <ul style="list-style-type: none"> a. Understand that scientists rely on evidence obtained from observations rather than authority, tradition, doctrine, or intuition. b. Students should value science as a way to develop reliable knowledge about the world. 				
<p>2. Students will solve problems scientifically. Students should:</p> <ul style="list-style-type: none"> a. Be able to construct and test hypotheses using modern lab equipment (such as microscopes, scales, computer technology) and appropriate quantitative methods. b. Be able to evaluate isolated observations about the physical universe and relate them to hierarchically organized explanatory frameworks (theories). 				
<p>3. Students will communicate scientific information. Students should: Communicate effectively about science (e.g., write lab (Continued)</p>				

Core Competencies Assessment 2009-2010: Area III Courses, cont.

(Place University/College Name here)

(Place University/College Course Number and Name here)

Laboratory Science Competencies, cont.

(Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
reports in standard format and explain basic scientific concepts, procedures, and results using written, oral, and graphic presentation techniques.)				
4. Students will apply quantitative analysis to scientific problems. Students should: a. Select and perform appropriate quantitative analyses of scientific observations. b. Show familiarity with the metric system, use a calculator to perform appropriate math operations, and present results in tables and graphs.				
5. Students will apply scientific thinking to real world problems. Students should: a. Critically evaluate scientific reports or accounts presented in the popular media. b. Understand the basic scientific facts related to important contemporary issues (e.g., global warming, stem cell research, cosmology), and ask informed questions about those issues. End – Laboratory Science				

Area III Assessment Contact Person _____

Name

Date

Phone number _____

Core Competencies Assessment 2009-2010: Area IV Courses

(Place University/College Name here)
 (Place University/College Course Number and Name here)

Social and Behavioral Sciences Competencies
 (Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
<p>1. Students will identify, describe and explain human behaviors and how they are influenced by social structures, institutions, and processes within the contexts of complex and diverse communities.</p> <p>Students should: Develop an understanding of self and the world by examining content and processes used by social and behavioral sciences to discover, describe, explain, and predict human behaviors and social systems.</p>				
<p>2. Students will articulate how beliefs, assumptions, and values are influenced by factors such as politics, geography, economics, culture, biology, history, and social institutions.</p> <p>Students should: Enhance knowledge of social and cultural institutions and the values of their society and other societies and cultures in the world.</p> <p align="center">(Continued)</p>				

Core Competencies Assessment 2009-2010: Area IV Courses, cont.

(Place University/College Name here)

Social and Behavioral Sciences Competencies, cont.

(Place University/College Course Number and Name here)

(Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
<p>3. Students will describe ongoing reciprocal interactions among self, society, and the environment. Students should: Understand the interdependent nature of the individual, family/social group, and society in shaping human behavior and determining quality of life.</p>				
<p>4. Students will apply the knowledge base of the social and behavioral sciences to identify, describe, explain, and critically evaluate relevant issues, ethical dilemmas, and arguments. – Students should: Articulate their role in a global context and develop an awareness and appreciation for diverse value systems in order to understand how to be good citizens who can critically examine and work toward quality of life within a framework of understanding and justice.</p>				

End – Social/Behavioral Sciences

Area IV Assessment Contact Person _____ *Name* _____ *Date* _____ Phone number _____

Core Competencies Assessment 2009-2010: Area V Courses

(Place University/College Name here)
 (Place University/College Course Number and Name here)

Humanities and Fine Arts Competencies
 (Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/ Priorities
1. Students will analyze and critically interpret significant and primary texts and/or works of art (this includes fine art, literature, music, theatre, and film.)				
2. Students will compare art forms, modes of thought and expression, and processes across a range of historical periods and/or structures (such as political, geographic, economic, social, cultural, religious, and intellectual).				
3. Students will recognize and articulate the diversity of human experience across a range of historical periods and/or cultural perspectives.				
4. Students will draw on historical and/or cultural perspectives to evaluate any or all of the following: contemporary problems/issues, contemporary modes of expression, and contemporary thought. (Continued)				

Core Competencies Assessment 2009-2010: Area V Courses, cont.

(Place University/College Name here)

(Place University/College Course Number and Name here)

Humanities and Fine Arts Competencies, cont.

(Place New Mexico Common Core Number here)

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/ Priorities
<p>For all Humanities and Fine Arts Competencies, students should: Possess an understanding of the present that is informed by an awareness of past heritages in human history, arts, philosophy, religion, and literature, including the complex and interdependent relationships among cultures.</p> <p>Note: For the purposes of the Humanities and Fine Arts requirement, courses will come from the areas of History, Philosophy, Literature, Art, Dance, Music, Theatre and those offerings from other disciplines that also include, among other criteria, analytical study of primary texts and /or works of art as forms of cultural and creative expression. This requirement does not include work in areas such as studio and performance courses or courses that are primarily skills-oriented. The requirements must be fulfilled by courses from two different disciplines.</p> <p>End – Humanities/Fine Arts</p>				

Area V Assessment Contact Person _____ *Name* _____ *Date* _____ Phone number _____